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MEMORANDUM

TO: Roy Crossland, EPA/START PO

FROM: Jennifer Shimamoto, E & E/STM

THRU: Robert C. Overfelt, CPG, E & E/START PM

DATE: July 17, 2000

SUBJECT: Abbreviated Preliminary Assessment: Peerless Industrial Coatings Site, St. Louis, Missouri.

CERCLIS ID: MOD006291678
TDD: S07-0001-016
PAN: 1475PISAXX
EPA/SAM: Bryant Burnett

INTRODUCTION

The Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START) was tasked by the U.S. Environmental Protection Agency (EPA) Region 7 Superfund Division, under Technical Direction Document (TDD) S07-0001-016, to conduct an abbreviated preliminary assessment (APA) for the Peerless Industrial Paint Site in St. Louis, Missouri.

Peerless Industrial Paints and Coatings Company (PIPCCO) formulated, manufactured, and sold industrial paints and coatings. The facility has been inspected numerous times by city, state, and federal agencies, and on many occasions has been cited for violations. EPA conducted an emergency removal action at the site from June through October 1993, during which approximately 784,067 pounds of ignitable materials (flashpoints below 140° F) were identified, bulked, transported, and disposed of off site. In February 1996, EPA conducted a time-critical removal action to remove and dispose of drums containing ignitable materials that had been stored outside the building. A potentially responsible party (PRP)-lead

removal was conducted from March through August 1999, and a fund-lead removal was conducted from June through July 1999 to remove the remainder of the materials on site.

The site qualifies for an APA because the wastes were removed from the building during the removal actions, and the remaining contamination is believed to pose no further threat to human health and the environment. The EPA Guidance for performing APAs under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (USEPA, 1999) was followed to complete this APA report. The scope of this APA was limited to a review of existing EPA contractor files.

SITE DESCRIPTION, OPERATIONAL HISTORY, AND WASTE CHARACTERISTICS

The PIPCCO site is located at 1265 Lewis Street, St.Louis, Missouri (Attachment 1: Site Location Map). The geographic coordinates are: latitude 38°38'15.7" N and longitude 90°10'55.0" W, (Attachment 3: Latitude and Longitude). The site is located in T45N and R7E; however, St.Louis City, where the site is located, is not divided into sections. The site is located in a highly urbanized and industrialized area along the Mississippi River, just north of downtown St. Louis.

The site is bounded on the north by O'Fallon Street, on the south by a vacant lot, on the east by Lewis Street, and on the west by a narrow alley. The site is situated on an incline that slopes down from the west to the east. Site drainage is from west to east into a St.Louis Metropolitan Sewer District (MSD) storm sewer located at the corner of O'Fallon and Lewis streets.

The site consists of a concrete and brick six-story warehouse that was originally built as an ice house to supply the 1904 Worlds Fair (Figure 2). The facility has approximately 125,000 square feet of storage space and three loading dock areas. Two loading docks are located on the first floor, one on the northeast side of the building and a second on the south side. The northeast loading dock is accessed directly from Lewis Street while the south dock is accessed through a gravel parking lot off Lewis Street. The third loading dock is located on the second floor on the west side of the building and is accessed from O'Fallon Street through the alley.

PIPCCO moved its operations to the site in 1979. PIPCCO formulated, manufactured, and sold industrial paints and coatings, with the majority of the coatings produced being solvent based. Solvents typically used were xylenes, toluene, methyl ethyl ketone (MEK), glycol ether, methyl isobutyl ketone (MIBK), butyl acetate, methanol, isopropyl alcohol, mineral spirits, and ethyl benzene (E & E, 1993).

Other materials used in manufacturing were resins and pigments. In addition to the solvents that were formulated into coating products, PIPCCO used flammable and/or chlorinated organic solvents to clean equipment and structures at their facility. The used cleaning solvents were collected in drums and containers and stored inside the building for some later indeterminate use.

Business records found during a 1993 removal action indicated that from 1979 until 1984, PIPCCO had accepted over 1,000 containers of waste flammable liquids/solvents from off site, and had charged the generator of the wastes for disposal (EPA, 1994). These waste solvents were then stored inside the building. In the 1980's, PIPCCO began acquiring waste and off-specification solvents, resins, and other chemicals, allegedly to be used in the PIPCCO manufacturing process to save on costs. The inventory of waste flammable solvents being stored at the Peerless site surpassed Peerless' ability to use the material. PIPCCO did not have a Resource Conservation and Recovery Act (RCRA) Part B permit or interim status which is required in order for a facility to legally act as a hazardous waste treatment, storage, or disposal facility (EPA, 1994).

PREVIOUS INVESTIGATIONS

The following information was obtained from various EPA reports and memorandums for the Peerless Industrial Paint Coatings Site (E & E, 1993; E & E 1995; EPA, 1994; EPA, 1996). The PIPCCO facility has been inspected numerous time by city, state, and federal agencies, and on many occasions has been cited for violations. The reported violations have included failure to provide employees with information and training on hazardous materials, manufacturing and storing solvents and paints without ventilation systems, improper cleanup of spills, storage and improper disposal of hazardous waste materials, failure to register as a hazardous waste generator, electrical problems, and other physical hazards. RCRA inspections conducted by the Missouri Department of Natural Resources (MDNR) in 1986 and 1989, followed by a sampling investigation in 1992, indicated that many materials stored in the building were RCRA ignitable, having flashpoints below 140°F.

In April of 1993, MDNR seized approximately 355 55-gallon drums and 5-gallon pails of materials that Larry Miller, owner of PIPCCO, had sold to the Barnhart Flea Market in Barnhart, Missouri. Sampling and subsequent field categorization determined that some of these drums were RCRA ignitable and deemed hazardous. Following this investigation MDNR sent a letter to EPA requesting an immediate removal action because of the hazardous nature of the materials stored at the Peerless facility and the Barnhart Flea Market.

EPA initiated an emergency removal action at the PIPCCO site on June 9, 1993. The objective of the removal action was to remove all materials with flashpoints below 140 F from both the Peerless facility and the Barnhart Flea Market. The drums stored at the Barnhart Flea Market were returned to the Peerless facility by the EPA Emergency Response Cleanup Services (ERCS) contractor in July 1993.

The initial phase of the removal action was completed in October, 1993. During the course of the operation, more than 2,500 55-gallon drums and over 800 smaller containers of waste exhibiting the characteristic of ignitability were pumped off and/or desludged. Waste material from these drums was hauled off site for disposal by LWD in Calvert City, Kentucky. The empty steel drums were crushed and the empty plastic drums were pelletized before being removed from the site for disposal. During the removal, approximately 4,000 containers (784,067 pounds of ignitable material) were removed from the site. An estimated 500 drums were determined to be non-ignitable by RCRA standards and were therefore not included in the removal action and were left on site.

During the emergency removal action, EPA's Technical Assistance Team (TAT) collected sediment samples from each of the two PIPCCO elevator shafts and from the basement floor drain basin. One soil sample and one duplicate soil sample also were collected from the south gravel parking lot. A background soil sample was collected from the Union Electric property adjacent to the northwest corner of the PIPCCO facility. These samples were all submitted to the EPA Region 7 Laboratory for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals analyses.

Bis(2-ethylhexyl)phthalate was detected at 34 milligram per kilogram (mg/kg) in the soil sample collected from the south parking lot and at 22 mg/kg in the sample duplicate. These levels are below the Superfund Chemical Data Matrix (SCDM) reference dose (RfD) of 1,600 mg/kg and the cancer risk screening concentration of 46 mg/kg. The levels are also below the Region 9 Preliminary Remedial Guideline (PRG) for industrial soil of 210 mg/kg. A variety of VOCs and SVOCs were detected in the samples collected from the two elevator shafts and from the basement drain sediments (see Table 1). The sediment samples were initially collected to evaluate the potential threat to surface water via the sewers; however, drainage from the elevator shafts could not be determined. It was determined that the basement drain released into the St. Louis MSD. However, detected concentrations of contaminants at this location were low. Based on these sample results, no removal of soil or sediment was conducted.

Table 1

ANALYTICAL RESULTS FOR SEDIMENT SAMPLES FOR PIPCCO
St. Louis, Missouri—August 3, 1993

Compound (mg/kg)	Sample Number/Location		
	003—East Elevator Shaft	004—West Elevator Shaft	005—Basement Drain
Ethyl Benzene	27.0	1,800	0.029
Methyl Ethyl Ketone	12.0	230 U	0.015 U
Methylene Chloride	21.0	1,600	0.016 U
Tetrachloroethylene	21.0	230 U	0.015 U
Toluene	62.0	4,800	0.090
Total Xylenes	150	7,000	0.140
Benzo(a)anthracene	28.0 U	190 U	1.50
Benzo(a)pyrene	28.0 U	190 U	1.50
Benzo(b)fluoranthene	28.0 U	190 U	2.40
Bis(2-ethylhexyl)phthalate	67.0	1,500	1.00 U
Butyl Benzyl Phthalate	40.0	190 U	4.40
Chrysene	28.0 U	190 U	1.40
Fluoranthene	28.0 U	190 U	1.90
Naphthalene	60.0	840	1.00 U
Pyrene	28.0 U	190 U	1.90

KEY: U = Chemical was undetected above the method detection limit

EPA conducted a property appraisal and drum inventory at the PIPCCO facility June 27 through 29, 1995. During this site inspection it was learned that numerous drums were being stored outside of the PIPCCO facility. Further investigation of these drums by E & E TAT revealed that at least 5 of the 55-gallon containers being stored outside contained ignitable materials. The site was then referred to MDNR for investigation of possible RCRA violations. MDNR conducted a RCRA inspection at the facility in October 1995 and learned that out of the more than 100 drums being stored outside during the June inspection only 50 remained. Of these 50 drums, three were found to exhibit the characteristic of ignitability; a flashpoint of less than 140°F.

During the 1995 EPA inspection, the team noted and photographed several areas that appeared to be spills or leakage from the containers outside the facility. A sample collected from one of these spill areas near the west dock was found to contain the following hazardous substances: ethyl benzene at 3,600 mg/kg, acetone at 8,200 mg/kg, MEK at 12,000 mg/kg, and total xylenes at 10,000 mg/kg (E & E, 1995).

The drums being stored outside were moved back inside the Peerless facility by Larry Miller at EPA's request. The drums containing ignitable material were removed from the site in February 1996. Based on the dock spill sample, EPA did not deem that any remedial activities were necessary after the Removal Action based on the dock spill sample results (EPA, 1996). The Removal Action did not address the several hundred drums still stored inside the building at that time because Mr. Miller maintained that he

was still using those materials in conducting his business. Sometime between 1996 and 1999 PIPCCO ceased all remaining business activities.

The following information was obtained from the two Removal Action reports prepared by E & E/ START for EPA (Attachment 2: Removal Support (PRP lead) and EPA-Funded Removal, E & E, 2000a and 2000b). In 1999, START was initially tasked to perform an inventory of an estimated 500 drums remaining on site. The inventory was performed March 16 through March 30, 1999. The inventory disclosed that there were approximately 400 55-gallon drums, 50 275-gallon totes, and about 154 smaller containers left inside the building. The inventory did not include smaller containers that were in an on-site laboratory, nor a number of bags of pigment powder.

On April 13, 1999, a PRP-lead removal action began, supervised by E & E/ START. The principal PRP was Cooke Coatings and Paint, Inc, a generator of chemicals sent to PIPCCO. The removal contractor was IT, Inc. IT inventoried the materials from April 14 through May 3, 1999, using the E&E/START inventory as an aid. All 55-gallon drums were overpacked and moved to the 2nd floor north, which was the designated staging area because of its access to the west dock. The smaller containers were staged on the 3rd floor because there was not enough space on the 2nd floor. About 200 100-pound bags of pigment powder were also inventoried and placed in drum liners to contain leakage.

While conducting the inventory, 17 large vats were discovered on the 3rd floor north, and six smaller vats were found on the 2nd floor, with many of them containing product. The volume of product was calculated to be over 2,300 gallons. These vats were overlooked in the original removal agreement signed by the PRP. EPA and the PRP agreed to split the removal costs for these materials.

After completing the bulk of the inventory, the crew performed waste stream categorization from May 17 through June 16, 1999. Concurrent with this activity, the crew inventoried the lab and continued taking samples as needed. The removal of material began June 2, 1999, and continued until August 18, 1999. During the course of the removal, 454 drums, 8,000 gallons of non-flammable polyol resin, as well as several hundred cubic yards of solid waste were removed from the Peerless facility.

On August 26, 1999, a site walk through was conducted by EPA on-scene coordinator Jeff Weatherford, E & E/START member Joe Parish, Don Seem and Dale Kriete from IT, John Bauer from Cooke Coatings and Paint (the principal PRP), Bob Hinckson from MDNR, and attorney Douglas McLead who was representing the PRP. The purpose of the visit was to verify that the objectives of the removal

had been achieved. After completing the site walk through, all participants agreed that the removal had been satisfactorily completed.

PATHWAY EVALUATIONS

Ground Water Pathway

Analytical results of soil samples collected at the site indicate that spills and leaks outside the Peerless facility have resulted in localized soil contamination. However, no ground water samples have been collected at the site because it is situated in an old, historically industrial area and attribution of ground water contamination to the site would be very difficult. Additionally, there are no private wells known to be in close proximity to the site. Drinking water is primarily supplied by municipal water utilities in this area, which obtain water from surface water intakes on the Mississippi River upstream of the site or on tributaries to the Mississippi River (MDNR, 1997). Because it appears that the ground water in the vicinity of the site is not used for drinking water, the exposure threat via the ground water pathway is considered to be low.

Surface Water Pathway

The nearest perennial surface water body is the Mississippi River, located approximately ¼ mile east of the site. The site is located on an incline that slopes from west to east. Site drainage is from west to east into a St.Louis MSD storm sewer located at the corner of O'Fallon and Lewis streets. Any liquid released within the building could have reached the public sanitary sewer system through the basement floor drain (EPA, 1993). The elevator shafts have undetermined drainage systems. Contaminants released into the MSD would be treated before being released into the Mississippi River, therefore this pathway is not considered significant. The PIPCCO site could also release to surface water directly through surface runoff, especially during flood conditions, because of its proximity to the Mississippi River. The annual mean flow of the Mississippi River at St.Louis is 188,300 cubic feet per second (USGS, 1996). Because of the high flow rate and associated large dilution factor of the Mississippi River, the potential threat to surface water is considered to be low.

Soil Exposure and Air Pathways

The majority of the contamination at PIPCCO was located inside the building, though some spills and leaks outside the building were reported. The majority of the area surrounding the building is paved. The

soil sample collected in 1993 indicated elevated levels of bis(2-ethylhexyl)phthalate in the gravel parking lot to the south of the building. However, the concentrations detected did not exceed either the SCDM or industrial PRG health-based benchmarks. The site is located in a highly commercial/industrial area with no known schools, day-care facilities, or residences within 200 feet of the property. The site is currently inactive, however Larry Miller, the owner of PIPCCO, is reported to be living in the offices on site.

SUMMARY AND CONCLUSIONS

Peerless Industrial Paints and Coatings Company formulated, manufactured, and sold industrial paints and coatings. The facility has been inspected numerous times by city, state, and federal agencies, and on many occasions has been cited for violations. EPA conducted an emergency removal action at the site from June through October 1993, during which approximately 4,000 containers (784,067 pounds) of ignitable materials (flashpoints below 140° F) were identified, bulked, transported, and disposed of off site. In February 1996, EPA conducted a time-critical removal action to remove and dispose of drums containing ignitable materials that had been stored outside the building. A PRP-lead removal was conducted March 1999 through August 1999, and a fund-lead removal was conducted June 1999 through July 1999. During the course of these removals, 454 drums, 8,000 gallons of non-flammable polyol resin, as well as several hundred cubic yards of solid waste were removed from the PIPCCO facility. All materials characterized on site as hazardous or otherwise have been disposed of and no known significant conditions warranting further action exist.

All containerized wastes have been removed from the building and the remaining contamination is unlikely to pose a significant threat. Ground water in the site area is not used for drinking water; therefore, the exposure threat via the ground water pathway is considered to be low. Any release that may occur from either overland flow or from the drain inside the building to the St.Louis MSD system would be treated before being released to surface water. A direct release into the Mississippi River from the site is possible via overland flow; however, the high flow rate and dilution factor of the Mississippi River make the threat via this exposure pathway minimal. Because the nearby residential population is minimal and the fact that contaminant concentrations in on-site soil did not exceed health-based benchmarks, the threat via the soil exposure and air pathways is low. The future use of the property is unknown, but because the area is zoned for industrial use commercial/industrial uses are likely. Further, EPA determined that the removal actions were sufficient to mitigate the threat to human health and/or the environment posed by the site. Attached is the Potential Hazardous Waste Site Preliminary Assessment Form (Attachment 4).

ATTACHMENTS:

1. Figure 1: Site Location Map and Figure 2: Site schematic
2. 2000 Removal Support (PRP lead) and EPA-Funded Removal Reports
3. Coordinate Worksheets
4. PA Form

REFERENCES

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U.S. Geological Survey (USGS), 1996, Water Resources Data–Missouri Water Year 1996, Water-Data Report MO-96-1.

ATTACHMENT 1

Figure 1: Site Location Map and Figure 2: Site Schematic

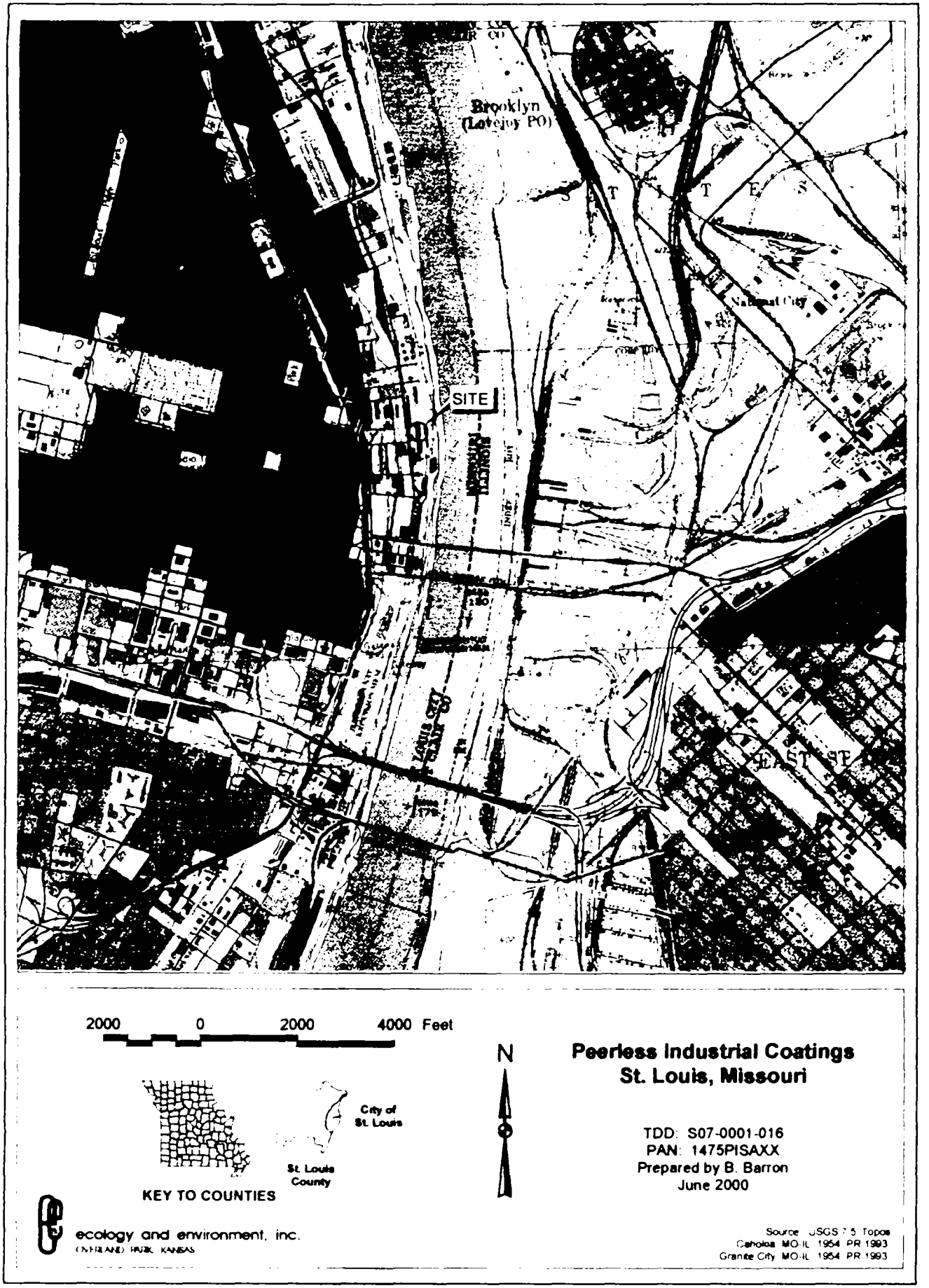

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Figure 1: Site Location Map

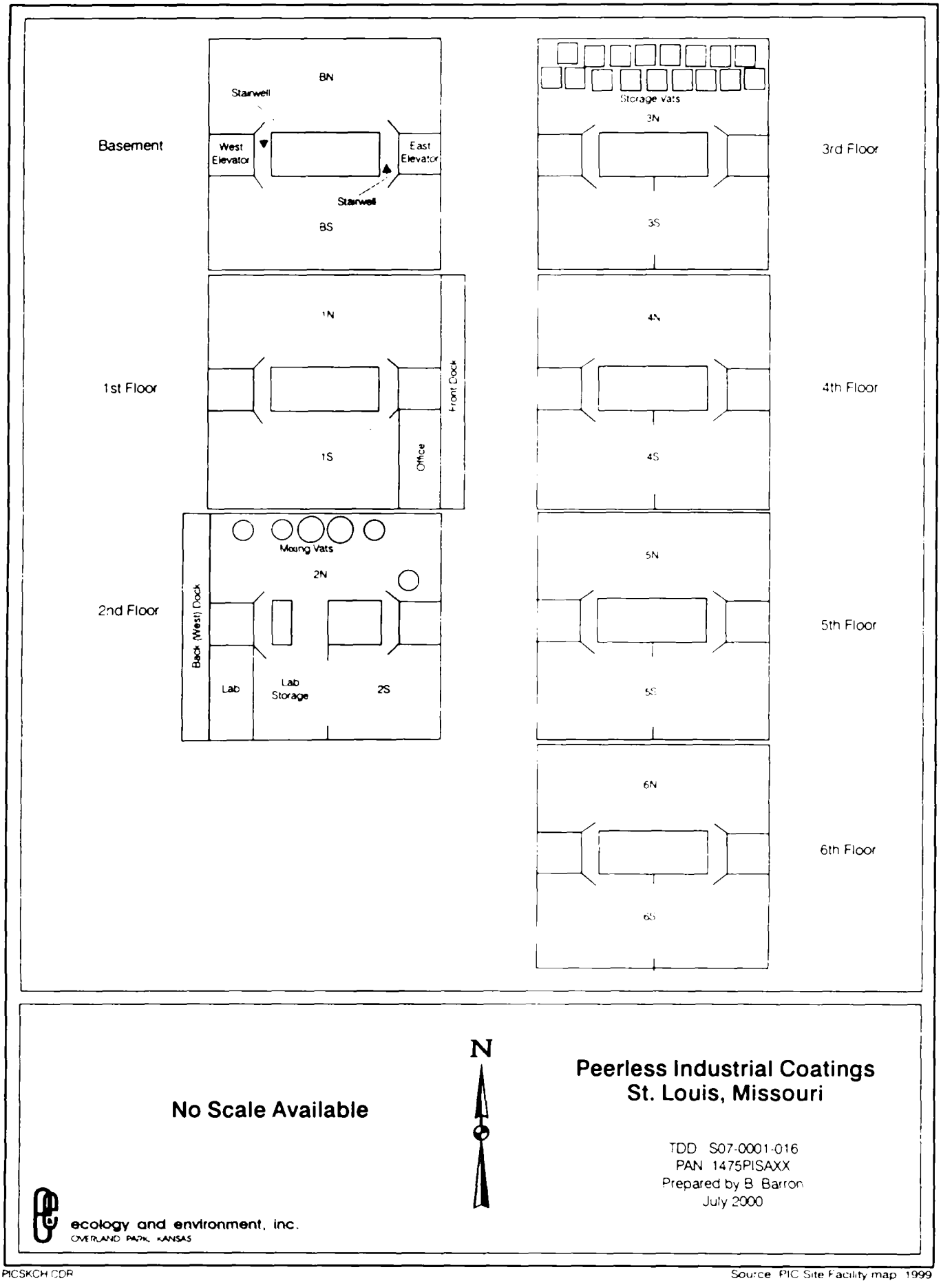

Figure 2: Site Schematic

ATTACHMENT 2

2000 Removal Support (PRP lead) and EPA-Funded Removal Reports